4 JAN 2013

Statement of Work
Commission Surgery HVAC Systems
Project 623-13-103

Contractor shall furnish all labor and materials to perform construction for Project 623-13-103 Commission Surgery HVAC Systems at Jack C. Montgomery VA Medical Center as required by specifications, as-built construction drawings, and this Statement of Work.

Scope of work includes the following:

1. Provide all labor and materials to correct the following existing deficiencies:
   a. Contractor shall provide and install wireless temperature/humidity sensor in the sterile field of each Operating Room (OR-1 thru OR-5). New sensors shall be the primary input for ORs. Existing wall sensors shall remain as secondary input if primary input fails. Sensors and programming sequences shall be commissioned.
   b. Contractor shall provide and install high limit differential pressure switch (0.7" wc) on all air control valves (20 Places) and input to alarm at digital controls enterprise server. This alarm shall be commissioned as well as the existing low differential pressure switch alarm.
   c. Contractor shall provide and install four dry contact water sensors on the floor of penthouse mechanical room 4C01-01 equidistantly spaced along the length of the west side of the penthouse (Reference Dwg. M-2 Sheet 33 of 92 and M-3 Sheet 34 of 92). Contractor shall route control wire and conduit to point of connection in junction box at Stairwell 4CS6-1 doorway. VA shall program engineering common alarm system for water sensor inputs.

2. Provide all needed support from VA controls contractor (Automated Building Systems – Tulsa) and Test & Balance contractor to complete commissioning. Verify all digital control system calibrations, control sequences, and PID loop tunings. Test and Balance of all systems in drawings shall be re-performed to verify the report as directed by the Commissioning Agent. New report shall also include room pressure relationships in all modes of operation. Sound and vibration readings should not need to be repeated unless there are concerns from the Commissioning Agent.

3. Review mechanical surgical suite HVAC as-built construction drawings (qty. 19) and controls as-built construction drawings (qty. 7) against field installed components and existing programmed sequences. Revise the draft functional performance test to as-built conditions and review with VA to ensure commissioning is comprehensive.

4. Review mechanical standby chiller as-built construction drawings (qty. 10) and controls as-built construction drawings (qty. 3) against field installed components and existing programmed sequences. Operational sequence commissioning will be limited to emergency generator operation mode only. Amend the draft

functional performance test to as-built conditions and review with VA to ensure standby chiller commissioning is comprehensive.

5. Execute commissioning tests and witness and document all results. Controls contractor shall provide all operating sequences, I&C drawings, and programming block diagrams as pdf attachment to existing graphics for HVAC system as well as AutoCad 2011 drawings.

Intent of the project is to commission the surgical suite HVAC and supporting systems in regard to mechanical components and digital control systems. Electrical systems will generally not be commissioned except for variable speed drives and motor starters and electrical controls that directly impact mechanical system operational sequences.

Existing systems have been in operation for over 1 year. Commissioning pre-functional checklist shall include verification by contractor of all items identified by the Commissioning Agent to ensure that systems are ready for testing.

The Commissioning Agent Firm shall be certified by the Association of Energy Engineers as a Certified Building Commissioning Firm (CBCF). The individual designated as the Commissioning Agent, shall be certified by the Association of Energy Engineers as a Certified Building Commissioning Professional (CBCP). Alternatively, the Commissioning Agent Firm and Commissioning Agent shall be certified by ACG as a Certified Commissioning Authority. Commissioning Firm and agent shall have prior experience in commissioning hospital HVAC systems and provide references. Proof of certification(s) shall be submitted to the Contracting Officer and the Resident Engineer prior to award of contract.

Contractor shall commission all surgical suite and standby chiller components to ensure a complete functional system in all modes of operation for the surgical suite (occupied, unoccupied, smoke control, standby chiller cooling, VFD bypass, all safety trips). Stand-by generator will not be commissioned. Standby chiller commissioning shall include monitoring of surgical suite environment during transition to standby chiller at design conditions. Commission to ensure appropriate cooling loads are shed to allow design conditions to be maintained in surgical suite.

Contractor is responsible for all changes to programming sequences, instrumentation and control calibrations, and test and balance adjustments in order to commission the HVAC systems. All re-testing shall be the responsibility of the contractor. Contact the VA for resolution to any components that have failed, are installed improperly, or are missing.

Commissioning shall include de-enegizing each individual surgical suite local controller and network controller to ensure HVAC systems default to failsafe operation.

Contractor shall provide laptop PC with Windows 7 operating system. Coordinate with digital controls contractor for minimum requirements to operate VA owned Workplace Tech configuration software.

All testing will typically be performed after hours (typically after 5PM-5AM weekdays) or on weekends.

Contract shall be completed within 20 weeks following Notice to Proceed. Contract extension and remobilization at no additional cost to the government may be required for any testing that requires near design heating or cooling outdoor conditions to be met.